

## ABSTRACT

The Inventor invented a combustion control device which optimizes combustion regardless of the cetane number of a fuel of an internal combustion engine (1) by focusing on the correlation between the cetane number and specific gravity of the fuel, and correcting combustion control based on the specific gravity of the fuel. The combustion control device comprises a sensor (7, 32, 36, 37) which detects the specific gravity of the fuel, a device which adjusts a combustion-related element of the internal combustion engine (1) such as fuel injection, compression end in-cylinder temperature and an intake air swirl (15, 19, 27, 51), and a controller (21) programmed to correct a target value of the element based on the specific gravity of the fuel (S414, S424, S430), and control the adjusting device so that the corrected target value is realized (S415, S425, S430).